

Accordingly, submitted herewith is a replacement set of 25 drawing sheets including Figures 1-25 (which are identical to corresponding figures in parent patent 6,611,556) and Figure 26 (which is identical to the plot originally shown on specification page 40).

Also enclosed are replacement specification pages 8 and 40 which have been amended to account for the new Figure 26.

It is courteously requested that this application now promptly proceed to issue.

Respectfully submitted,



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DEPOSIT ACCOUNT AUTHORIZATION:

Throughout the prosecution of this application the Patent and Trademark Office is authorized to charge any additional fees which may be required, or credit any overpayment to Account No. 501232.



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CERTIFICATION OF MAILING:

I hereby certify that this correspondence is being either facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, PO Box 1450, Alexandria VA 22313-1450 on 1 May 2007.



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Figure 15 and 16 are block diagrams similar to Figure 13 but modified to include a correlation detection capability;

Figure 17 is a block diagram similar to Figure 13 but modified to introduce a symbol based detection capability;

5 Figure 18, 19, and 20 represent frame format variants depicting the inclusion of one or more data pulses within a frame;

Figures 21 and 22 are block diagrams similar to Figure 9 but expanded to exemplify how the monitor repertoire can acquire ID codes;

10 Figures 23A, 23B, 23C1, 23C2, 23C3, 23C4, 23D and 23E schematically depict arrangements for conserving sender battery power;

Figures 24A and 24B schematically depict arrangements for discerning sender battery status; and

15 Figure 25 is a functional block diagram of a system in accordance with the invention using a wire as the communication medium; ;
and

Figure 26 is a plot showing the maximum number of senders which can be located in a given field as a function of the number of pulses transmitted by each sender.

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Replacement Page

$$P_0 = \frac{1}{(30)(365)(24)(60)(60)(10)^4} = 10^{-13}$$

- Using those particular design values, the plot below is shown in
- 5 Figure 26 depicts the performance of the system, $N_0(x)$. That is, the maximum number of senders that can be located within the field of the monitor and still achieve the specified maximum false alarm rate of 10^{-13} false reports per sender per sample. The abscissa of the plot is, x , the number of pulses that each sender transmits for its unique pseudorandom pulse pattern.
- 10 The plot of Figure 26 clearly shows that the performance of the system peaks for a particular number of pulses, which in this case is 30. For this system, the maximum number of senders is approximately 610; if more than 610 senders are in the environment of the monitor, then the false alarm rate is expected to exceed the 30-year design criterion.

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Replacement Sheet